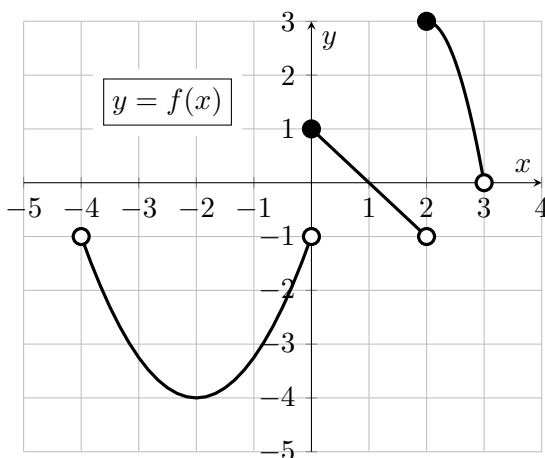


1. [9 points] The entire graph of a function  $f(x)$  is shown below to the left. Also shown is a table of some values for the functions  $p(x)$  and  $r(x)$ . Assume that the function  $p(x)$  is invertible.



$x$	-1	0	1	2	5
$p(x)$	4	2	-1	-3	-5
$r(x)$	3	1	-4	-2	0

- a. [3 points] Find the domain and range of  $f(x)$ . Give your answers using interval notation or using inequalities. *You do not need to explain or justify your answer.*

**Answer:** Domain: \_\_\_\_\_

Range: \_\_\_\_\_

- b. [2 points] Calculate the average rate of change of  $f(x)$  on the interval  $-2 \leq x \leq 2$ . *Partial credit may be awarded for work shown.*

**Answer:** \_\_\_\_\_

- c. [4 points] Find each of the following, or write N/A if a value does not exist or there is not enough information to find it. *You do not need to show work.*

(i)  $p^{-1}(2)$  **Answer:**  $p^{-1}(2) =$  \_\_\_\_\_

(ii)  $f(p(0))$  **Answer:**  $f(p(0)) =$  \_\_\_\_\_

(iii)  $f(r(1))$  **Answer:**  $f(r(1)) =$  \_\_\_\_\_

(iv) If  $g(x) = f(x - 2) + 3$ , find  $g(0)$ . **Answer:**  $g(0) =$  \_\_\_\_\_